

REMARKS

Claims 1-2, 4-10 and 12-19 are active. Claims 3, 11 and 20 are canceled. Claim 20, canceled is objected to. The drawings are objected to under 37 CFR 1.83 and 1.84. Claims 1, 2, 5, 6, 10, 14, 17 and canceled claim 20 are rejected under 35 USC 102 as anticipated by Hart '509. Claims 3, 11, 15, and 18 are rejected under 35 USC 103 as being unpatentable over Hart.

Objected to claim 20 is canceled.

Claims 3 and 11 are canceled in that these claims include subject matter similar to that in amended claim 1 and thus are redundant.

Amendment is made to the drawings, copies enclosed, to meet the various objections to the drawings. In Fig. 4, the reference numeral 13 is deleted as requested and also the specification is silent as to this reference numeral. The reference numeral 10b is added to Fig. 5 as requested. Figs. 6 and 7 are new and depict the various layers of the OFET depicted in Figs. 1 and 2.

The cross sectional areas depicted in Figs. 6 and 7, show generally source, drain electrodes, an insulator and a semiconductor layer as is generally known in this art. The specification at page 1, lines 13-14, cites an article by W, Fix et al., copy enclosed. Fig. 2 of this article depicts a cross sectional view of a top gate OFET and via. As shown, the gate is at the top of the device, under which is an insulator, followed by a semiconductor layer, and source and drain electrodes, all supported on a substrate.

This reference is also cited in commonly owned US Pat. No. 6,960,489 cited of record in the IDS filed in the above-entitled instant application. Numerous others of the references cited in this IDS show that such a cross section of an OFET is well known and common in the organic semiconductor industry. Also,

reference is made to the instant above-entitled application, page 1, line 37 to page 2, line 11, which also describes the component layers of an OFET as including a first electrode layer with source and drain electrodes, a semiconducting layer, an insulator layer, and a second electrode layer. Thus, no new matter is introduced by new figures 6 and 7. Approval and entry of the amended figures is respectfully requested.

Amendment is made to the specification to correct the various objected to terms as well as to be consistent with the correction to the objections to the drawing. In particular, the description of new figures 6 and 7 is included. With respect to the reference numeral 13 in Fig. 4, this is deleted as this incorrect as noted by the Action and also this reference numeral does not appear in the specification.

The Action refers to the drawing as not showing Fig. 1a. Perhaps the Examiner has overlooked applicants' preliminary amendment wherein this figure designation in the specification is amended and thus this objection is moot as not based on the specification as previously amended. Approval of the replacement sheets 3 and 4 and the new sheet with the new drawing Figs. is respectfully requested as in compliance with the requests of the Action. Applicants believe that all formal matter objections have been met and this basis of the rejection should be withdrawn. If any of the objections have been overlooked, the Examiner is respectfully invited to call the undersigned to address and correct such omissions.

Amended claims 1-2, 4-10 and 12-19 are submitted for the Examiner's reconsideration

Amended claim 1 includes certain of the subject matter of canceled claim 3. Claim 11 also canceled also has similar subject matter as claim 3. These claims are rejected as obvious over Hart. Applicants traverse this rejection as not applicable to amended claim 1. Therefore, the Action's reasons regarding the rejection of claims 3 and 11 is moot as this subject matter is changed somewhat in amended claim 1. Other amendments are made to claim 1 to improve its form and in the interest of clarity and consistency. For example, the first electrode layer comprises both the drain and source electrodes, which are not in separate layers as originally claimed.,

See applicants' specification page 3, the paragraph at lines 11-20, which states the gate electrode additionally covers [i.e., overlies] a small part of the source or drain electrode. Also, at least one other part of one or both of the first electrodes [the source and drain] is covered. This provides full support for the amended claim 1 amended portion.

The claim 3 in the preliminary amendment called for:

The OFET as claimed in claim 1 wherein the second electrode layer completely covers the current channel of the first electrode layer and, in addition, at least one other part of the first electrode layer, this other additionally covered part having a width in the range from 0 to 20 μm and having a length in the range of the length of the current channel.

This subject matter is added to amended claim 1. Claim 11 canceled called for similar subject matter. See also figures 2A and 2B wherein the gate 13 appears as partially overlying the electrode 1 and also electrode 2, but not as prominently as electrode 1. The gate electrode is also shown as completely overlying the channel between electrodes 1 and 2. This partial overlying of the drain and source electrodes depends upon the alignment accuracy of the production

technology and is in the range of a few (0 to 8) μm to approximately 20 μm , preferably 1 to 5 μm , but as low as possible (see the description page 3, lines 17-20. The structuring of the second electrode layer to reduce the overlying portion of the gate electrode over the source/drain electrodes of the lower or first electrode layer solves a heretofore unrecognized problem caused by the gate electrode overlying a large portion of the drain and source electrodes as disclosed by and unrecognized by Hart.

This problem is parasitic capacitances created by the large overlying portion of the gate electrode with the source and drain electrodes. See page 2 of applicants' specification, lines 13-20 discussing parasitic capacitances.

Hart does not recognize the problem of parasitic capacitances caused by a relatively large foot print of the gate electrode overlying the source or drain electrodes. Hart is silent as to this. Also, more importantly, Hart disclosed in Fig. 2b gate electrodes 18, 28 and 38. These gate electrodes have relatively large foot prints that cover substantially the entire region of the device which also includes the source and drain electrodes (not shown in Fig. 2b, but shown in Fig. 2a as electrodes 13, 15, 23-25 and 33). The electrodes of Fig. 2a have a much smaller foot print than the gates of Fig. 2b.

See also Hart figure 1 wherein the gates 18, 28 and 39 are shown much larger in area than the source/drain electrodes 14, 15, conductors 4. Thus unrecognized undesirable parasitic capacitances are present in Hart and which are minimized by applicants' disclosure. The Hart structure is contradictory to what is claimed in amended claim 1, and teaches away. Such a teaching away manifests the unobviousness of amended claim 1. This claim is believed unobvious over Hart and thus is believed allowable.

The remaining claims 2, 4-10 and 12-19 depend from claim 1, include all of the structure therein and are believed allowable at least for these reasons as well as for additional structures claimed.

Since applicants have shown that claims 1-2, 4-10 and 12-19 are in proper form for allowance such action is respectfully requested.

Enclosed is a separate paper requesting a two month extension of time to respond to the Office Action and a check in the amount of \$460 for the extension fee.

While no further fee is believed due for this paper, the Commissioner is authorized to charge deposit account 03 0678 for any additional fees that might be due or credit this account for any overpayments.

EXPRESS MAIL CERTIFICATE
LABEL NO. EV 406640780US
Deposit Date October 17, 2007

Respectfully submitted,
Walter Fix et al.

I hereby certify that this paper and the attachments hereto are being deposited today with the U.S. Postal Service "Express Mail Post Office To Addressee" service under 37 CFR 1.10 on the date indicated above addressed to:


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 October 17, 2007

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